



Seminar Announcement

Organized within the course "Edge AI for Solving Real-World Problems: Theory and Applications", PhD Course in Information Engineering, and open to all interested parties

25 May 2026, 14:30 - 17:30, Faculty of Engineering, Room 155/d2

PERCEPTUAL TO GENERATIVE EDGE AI: PRACTICAL USE OF THE EDGEAI CORE TECHNOLOGY ON SENSORS AND MCU

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Abstract

Artificial intelligence (AI) at the beginning did not have notion of hardware or software deployability. However as soon as it became scientifically mature, the cloud was its initial place, and the industry started to provide services. Quite rapidly then, other industries focused on their deployment at the edge. At the beginning it was Perceptual AI, which processes sensor data on devices like sensors and microcontrollers. And then generating semantic rich data. A key challenge was managing the heterogeneity challenge in terms of hardware and software components. STMicroelectronics addresses this with a Unified AI Core Technology solution, ensuring compatibility with products like automotive and IoT microcontrollers and programmable sensors, securing AI tiny inferences on low power edge devices. However, the technology did not stop there. Generative AI rapidly widened the digital divide due to its complexity and cost, making advanced technology less accessible to the masses. Edge AI helps bridge this gap by offering scalable, cost-effective solutions that empower many embedded developers to leverage AI without costly computing infrastructure. Understanding these concepts is crucial for students and developers, aiming to leave a footprint in the AI-driven workplace, performing innovation at the highest productivity level.

Bio



Danilo Pau is Technical Director, IEEE AAIA & ST Fellow, in STMicroelectronics. Danilo (h-index 31, i10-index 101) graduated at Politecnico di Milano on 1992. He worked on memory reduced HDMAC HW design, MPEG2 video memory reduction. on video coding, transcoding, embedded (Khronos) 2/3D graphics, as cochair ISO/IEC/MPEG CDVS and CDVA standards, and computer vision. Currently, his work focuses on the ST Unified AI Core Technology and Edge generative AI. He supervised many students.

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